**COURSE FAB1048: SEMI-AUTOMATED/AUTOMATED WELDING**

**Level:** Introductory

**Prerequisite:** FAB1010: Fabrication Tools & Materials

**Description:** Students develop basic knowledge and skills related to the use of Gas Metal Arc Welding (GMAW) and Flux Cored Arc Welding (FCAW) processes in both personal use and commercial applications. They also develop introductory knowledge of Submerged Arc Welding (SAW) processes.

**Parameters:** Access to a fabrication work centre complete with GMAW and/or FCAW equipment and supplies, and to instruction from an individual with formal, specialized training in arc welding practices.

**Supporting Course:** FAB1050: Basic Electric Welding

**Outcomes:** The student will:

**1. take preventive measures to avoid accidents and personal injury to self and others by identifying health and safety hazards associated with GMAW, FCAW and SMAW.**

Complete the Electric Welding Safety Exam

**2. identify power sources used in GMAW, FCAW and SAW processes.**

Complete the FAB1048 worksheet

**3. select appropriate electrode wires and shielding gases for use in GMAW and FCAW processes.**

Examine the equipment used in the shop and record the wire details and gas type on the worksheet

**4. perform safe start-up and shut-down procedures for GMAW and/or FCAW processes.**

Demonstrate safe start up and shut down for instructor

**5. demonstrate safe GMAW and/or FCAW processes on light gauge mild steel and/or mild steel plate in the flat and horizontal positions.**

Complete the butt, T, lap and outside corner welds in the flat position

**6 demonstrate basic competencies: Oral and written communication; demonstrate responsibility on a variety of levels.**

Create plans, bill of materials, complete evaluation, work cooperatively in shop

**7. make personal connections to the cluster content and processes to inform possible pathway choices.**

Complete occupational connections worksheet